

IST

Andy Miller

24 August 1995

Baseline List of ISTs



Baseline List of ISTs

- **Maximum Number of ISTs Connected to the EOC at Any Single Time is 15**
- **10 Dedicated, Simultaneous IST Connections at the Following Locations:**
 - CERES -> 4 at Langley
 - MODIS -> 2 at GSFC
 - MOPITT -> 1 at University of Toronto; 1 at NCAR in Boulder
 - MISR -> 2 at JPL
- **6 Additional Non-dedicated IST Connections at the Following Locations:**
 - CERES -> 4
 - MODIS -> 1
 - MISR -> 1
- **Other Potential ISTs**
 - Valley Forge, ASTER

IST Requirements



Operating System

- **Unix**

Hardware Specifications

- **Unix Workstation (Sun, HP, SGI, DEC)**
- **Mid-range CPU (e.g., Sparc Station 20)**
- **64 MB Memory**
- **6 GB Hard Disk**
- **Ethernet Card**
- **4 mm DAT Tape Drive**

IST COTS



COTS Used to Develop IST Software (Development License)

- **IMSL (Math Library)**
- **Builder Accessory (BX)**
- **Data Base Accessory (DBX)**
- **Delphi (Planning and Scheduling)**

COTS Required (Run-Time License)

- **Motif/X-Windows (latest version)**
- **DCE**
- **SyBase Client (ECS-provided)**
- **Kerberos software (ECS-provided)**
- **HTML Browser (NETSCAPE, MOSAIC)**

IST Release Availability



Release Availability of IST

- **Partial Delivery -> 1/97**
 - **Dependent on EOC connectivity**
 - **Limited EOC support available**
- **IST Needed for EOC Compatibility Test -> 5/97**
- **Final IST Delivery , Release B -> 9/97**
- **AM-1 Launch - 6/98**

IST Training



Documentation

- **User's Manual Provides Information for the Instrument Operations Teams Describing How to Use the System**
- **Availability Date**
 - **Release A draft -> October 1996**
 - **Release B -> April 1997**

Training at GSFC

- **Date: Tentatively Scheduled to Occur During Fall 1997**
- **IOT Training Provided With FOT Training at GSFC EOC**
- **Training Material Will Be Packaged for the FOT and the IOT**

IST Software Maintenance Approach



Development Phase

- **Prior to Spacecraft Launch and Operations**
- **Users Can Electronically Submit Discrepancy Reports (DRs) That Specify an Anomaly to the Software Maintenance Team**
- **Software Maintenance Team Will Review the DRs Including Priority Determination**
- **Based on the Priority, the DR Will be Incorporated Into the Next Release or Addressed As Soon As Possible**

Operations Phase

- **Same General Approach As During the Development Phase**

Delivery of IST Software



IST Software Update Notification (e-Mail) Provided to Each IST Site

- **Each Instrument Team Has a Designated IST Site Manager**
- **IST Site Manager is Responsible for 'Pulling' IST Software From EOC for the IST Site**
- **Reduces Network Traffic**
 - **IST Site Manager manages/tracks Local IST Distribution and Installations**
 - **Provides single point of contact for EOC**

IST Software Components

- **IST Executable Software**
- **Data Files (e.g., New Display Pages, Room Definitions)**

'Tarball' Approach Used to Move Files From EOC to IST

- **Enables Efficient Configuration Control of IST Software**

Delivery of IST Software



Environment Up-to-date Procedure

- **Version Check Function Provided in the IST Software**
 - Verify that IST has the latest software and data files
- **Enables IST User to Ensure They Have the Latest Software**
 - IST user can 'pull' latest copy from the IST site manager, if necessary

Policy for Upgrading COTS Software



FOS Will Coordinate Upgrades to COTS

- **Upgrades to IST System Software Will Be Planned and Coordinated With the Instrument Operations Teams In Advance**
 - COTS include operating systems, DCE, Motif, etc.
 - Nominally six months behind latest COTS upgrade
- **FOS Will Determine When COTS Upgrades Need to Be Performed for EOC and IST**
 - Ensure IST software is in synch with COTS products and EOC software
 - FOS will test COTS upgrades in the EOC prior to releasing the updated IST software to be compatible with COTS upgrades

IST Data Files



File Management

- **Instrument Operations Teams Have the Capability to Create, Modify, and Delete Many Operational Files**
- **Examples: Display Pages, Rooms, Procedures, RTCs**
- **Instrument Operations Teams Can Use Public Data That has Been Defined By the FOT and Other Instrument Teams or They Can Use Private Data That They Have Defined**

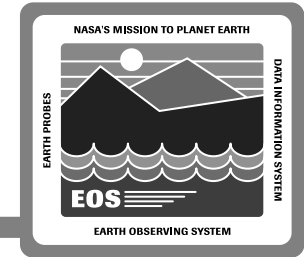
Public Data

- **Data That has Been Approved By the FOT and is Under FOT Configuration Control**

Private Data

- **Data That is Defined Locally On An Instruments Workstation**

IST Data Files



File Access

- **User Environment Enables FOS Software to Allow Users to Access Both Public and Private Data Files**
- **Precedence**
 - **FOS software search order is the Public data files followed by Private data files**
 - CERES display page: search Public location first**
 - If CERES display page not found in Public location, then Private location searched**
- **Precedence is Required**
 - **Ensure that two users looking at the same display page are using the same data file**
 - **Eliminate operational ambiguity**
 - **Implication is that user has unique names for Private data files**

IST Data Files



User File Environments

- Private
- Controlled FOT Staging Area
- Public

Data File Migration Path

- User Defines Private Data Files
- User Migrates Private Data Files to the Controlled FOT Staging Area
- FOT Reviews Data Files
- Approved Data Files Migrate to the Public Area by the DBA
- FOT Will Coordinate With IOT Any Discrepancies, Problems, Etc.